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| --- | --- | --- | --- | --- | --- | --- | --- |
| **互搭式螺旋型钢夹套强度校核** | | | 计算单位 |  | | | |
| 计算所依据的标准 | | | | **HG/T 20569-2013** | | | |
| **计 算 条 件** | | | | **夹 套 简 图** | | | |
| 设计温度, t | | °C | **$$001** | $01  $02  $03  $04  $05 | | | |
| 压力试验类型 | | **液压试验** | |
| 容器 | 材料标准号 | **$$003** | |
| 材料牌号/名称 | **$$004** | |
| 设计压力, Psd | MPa | **$$005** |
| 静压力, Pss | MPa | **$$006** |
| 内直径, Dsi | mm | **$$007** |
| 名义厚度, δsn | mm | **$$008** |
| 焊接接头系数, Φs | / | **$$009** |
| 腐蚀裕量, Cs2 | mm | **$$010** |
| 夹 套 | 材料标准号 | **$$011** | |
| 材料牌号/名称 | **$$012** | |
| 设计压力, Pjd | MPa | **$$013** |
| 静压力, Pjs | MPa | **$$014** |
| 尺寸, j | mm | **$$015** |
| 尺寸, t | mm | **$$016** |
| 名义厚度, δjn | mm | **$$017** |
| 腐蚀裕量, Cj2 | mm | **$$018** |
| **材 料 特 性** | | | | | | | |
| 容器材料 | 密度, ρs | kg/m³ | **$$019** | 夹套材料 | 密度, ρj | kg/m³ | **$$020** |
| 设计温度许用应力, [σ]st | MPa | **$$021** | 设计温度许用应力, [σ]jt | MPa | **$$022** |
| 试验温度许用应力, [σ]s | MPa | **$$023** | 试验温度许用应力, [σ]j | MPa | **$$024** |
| 抗拉和屈服  强度控制的应力, [σ]st1 | MPa | **$$025** | 抗拉和屈服  强度控制的应力, [σ]jt1 | MPa | **$$026** |
| 试验温度屈服点, RseL | MPa | **$$027** | 试验温度下屈服点, RjeL | MPa | **$$028** |
| 设计温度弹性模量, Est | 103MPa | **$$029** | 设计温度弹性模量, Ejt | 103MPa | **$$030** |
| 负偏差, Cs1 | mm | **$$031** | 负偏差, Cj1 | mm | **$$032** |
| **过 程 参 数 计 算** | | | | | | | |
| 容器厚度附加量, Cs | | mm | Cs = Cs1 + Cs2 | | | | **$$033** |
| 容器有效厚度, δse | | mm | δse = δsn - Cs | | | | **$$034** |
| 容器计算压力, Psc | | MPa | Psc = Psd + Pss | | | | **$$035** |
| 夹套厚度附加量, Cj | | mm | Cj = Cj1 + Cj2 | | | | **$$036** |
| 夹套有效厚度, δje | | mm | δje = δjn – Cj | | | | **$$037** |
| 夹套计算压力, Pjc | | MPa | Pjc = Pjd + Pjs | | | | **$$038** |
| 夹套内直径, Dji | | mm | Dji = Dsi + 2δsn + 2j - 2δjn | | | | **$$039** |
| **容 器 筒 体 厚 度 校 核** | | | | | | | |
| 计算厚度, δsc1 | | mm |  | | | | **$$040** |
| 计算厚度, δsc2 | | mm |  | | | | **$$041** |
| 设计厚度, δsd | | mm | δsd = max{δsc1, δsc2} + Cs2 | | | | **$$042** |
| 厚度校核 | | / | δsn ≥ δsd + Cs1 | | | | **$$043** |
| **夹 套 厚 度 校 核** | | | | | | | |
| 计算厚度, δjc1 | | mm |  | | | | **$$044** |
| 计算厚度, δjc2 | | mm |  | | | | **$$045** |
| 计算厚度, δjc3 | | mm |  | | | | **$$046** |
| 取用计算厚度, δjc | | mm | δjc = max{δjc1 , δjc2, δjc3} | | | | **$$047** |
| 设计厚度, δjd | | mm | δjd = δjc + Cj2 | | | | **$$048** |
| 厚度校核 | | / | δjn ≥ δjd + Cj1 | | | | **$$049** |
| **夹 套 压 力 试 验** | | | | | | | |
| 试验压力值, PJT | | MPa |  | | | | **$$050** |

注：型钢与容器壳体须为全焊透结构。